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EXAMINER	
FRAZIER, BARBARA S	

ART UNIT	PAPER NUMBER
1611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/561,631	BROMER ET AL.	
	Examiner	Art Unit	
	BARBARA FRAZIER	1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *1 and 8-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4* is/are rejected.

7)☒ Claim(s) *5-7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/19/05,6/30/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, drawn to a process for the preparation of isotonic oil emulsions containing estrogen and progestagen.

Group II, claim(s) 2-7, drawn to hormone-containing isotonic oil emulsion.

Group III, claim(s) 8, drawn to use of the isotonic oil emulsion for preparing a medicament for postnatal hormone substitution in premature babies.

Group IV, claim(s) 9, drawn to use of the isotonic oil emulsion for preparing a medicament for the treatment of neurological damage after strokes.

Group V, claim(s) 10, drawn to a process for hormone substitution in premature babies by using the isotonic oil emulsion.

Group VI, claim(s) 11, drawn to a process for the treatment of neurological damage after strokes by using the isotonic oil emulsion.

2. The inventions listed as Groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The common technical feature in all groups is an oil emulsion for intravenous administration comprising progestagens and estrogens. This element cannot be a special technical feature under PCT Rule 13.2 because the element is shown in the prior art. Trotter et al (J. Clin. End. Metab., 84(12), 4531-4535, 1999, cited by Applicants) disclose an oil emulsion of an estradiol (an estrogen) and pregn-4-ene-3,20-dione (a progestagen) administered as an IV infusion (see page 4532, 1st column). (Examiner's note: regarding the limitation "obtainable by the process according to claim

1" in claim 2, this limitation is a product-by-process limitation. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. See MPEP 2113. Since the product-by-process limitation of claim 2 does not impart a structural limitation to the emulsion, it is not given patentable weight, and therefore is not a part of the common technical feature.)

3. During a telephone conversation with Mr. Tom Dao on 1/20/10 a provisional election was made with traverse to prosecute the invention of Group II, claims 2-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1 and 8-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder**. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Drawings

6. New corrected drawings in compliance with PCT Rule 11 are required in this application because the drawings are blurred and do not contain “well-defined lines and strokes”. See PCT Rule 11.13(a). Additionally, the lettering in the Figures is in German instead of English, and is not “simple and clear”. See PCT Rule 11.13(e). Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The

corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 4 recites that the emulsion contains from 1 to 60% by weight of an estrogen and from 1 to 50% by weight of a progestagen, based on the total composition. However, page 6 of the specification recites that the lipid emulsion comprises between 0.005 and 0.5% by weight of at least one estrogen and between 0.05 and 5% by weight of at least one progestagen, based on the total composition (see page 6, last paragraph). The Examiner suggests incorporating the claimed subject matter into the specification, or amending claim 4 to be consistent with the specification as currently written.

Claim Objections

8. Claims 5-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 2 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Heckenmuller et al (WO 94/22426, cited by Applicants).

The claimed invention is drawn to a hormone-containing isotonic oil emulsion for intravenous administration comprising progestagens and estrogens, obtainable by the process according to claim 1.

Heckenmuller et al disclose two-phase emulsion systems wherein the sex hormones progesterone and/or 17-β-estradiol are dissolved in the oil phase to be used, which is then admixed with the water phase and other components (page 5, lines 15-24). Compositions comprising both hormones are exemplified (Examples 3-5). Therefore, the invention of Heckenmuller et al anticipates the claimed invention.

Regarding the limitation “for intravenous administration”, this limitation recites an intended use and does not impart a structural limitation other than what is already claimed. Since the components of the emulsion of Heckenmuller et al are the same as those of the claimed invention, the emulsion of Heckenmuller et al would be capable of use for intravenous administration, absent evidence to the contrary. It is further noted that, while Heckenmuller et al teach that there are “inconveniences” associated with parenteral (e.g., intravenous) use, such as the need for sterile delivery devices and

medical assistance, Heckenmuller et al also teach that parenteral administration does provide the benefit of circumventing the undesired first pass effect (from oral administration), and the "inconveniences" noted by Heckenmuller do not prevent the emulsion from being used for intravenous administration.

Regarding claim 2, Heckenmuller et al exemplify emulsions wherein the ratio of progesterone to estradiol is approximately 18:1 (see Examples 3-5). This ratio is within Applicant's range of from 2:1 to 200:1.

11. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Trotter et al (J. Clin. End. Metab., 84(12), 4531-4535, 1999, cited by Applicants).

The claimed invention is delineated above (see paragraph 10).

Trotter et al disclose an oil emulsion of an estradiol (an estrogen) and pregn-4-ene-3,20-dione (a progestagen) administered as an IV infusion (see page 4532, 1st column). Therefore, the invention of Trotter et al anticipates the claimed invention.

Regarding the limitation, "obtainable by the process according to claim 1", this limitation is a product-by-process limitation. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. See MPEP 2113. Since the product-by-process limitation of claim 2 does not impart a structural limitation to the emulsion, it is not given patentable weight.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted)

MPEP 2113. See also In *SmithKline Beecham Corp. v. Apotex Corp.*, No. 04-1522 (Fed. Cir. February 24, 2006).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heckenmuller et al (WO 94/22426, cited by Applicants)**

The claimed invention and the invention of Heckenmuller et al are delineated above (see paragraph 10). Heckenmuller et al further teach that the hormones are present in a concentration to ensure a single dose 3 ug – 0.5 mg of 17-β-estradiol and/or 0.1 - 10 mg of progesterone (page 6, lines 1-3).

Regarding claim 4, Heckenmuller et al do not specifically teach the weight amounts specified in claim 4.

However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ said amounts; thus arriving at the claimed invention. One skilled in the art would be motivated to do so, with a reasonable expectation of success, because the dosage amounts specified in Heckenmuller et al would result from concentration ranges which overlap and/or are comparable to those of the claimed invention, absent evidence to the contrary. Additionally, it would be within the purview of the skilled artisan to manipulate the amounts of the hormones from within said ranges by routine experimentation, in order to optimize the efficacy of the resultant emulsion.

16. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trotter et al (J. Clin. End. Metab., 84(12), 4531-4535, 1999, cited by Applicants).

The claimed invention and the invention of Trotter et al are delineated above (see paragraphs 10 and 11). Trotter et al further teach that the concentration of estradiol is between 2.2 ng/ml and 0.22 mg/ml, and the concentration of pregn-4-ene-3,20-dione is between 0.4 ug/ml and 1.25 mg/ml (page 4532, 1st column).

Regarding claim 3, the concentrations taught by Trotter et al result in progestagen:estrogen ratios which overlap those of the claimed invention; one skilled in the art would be motivated to manipulate the ratio of progestagen and estrogen from within said ranges by routine experimentation, in order to optimize the efficacy of the resultant emulsion.

Regarding claim 4, Trotter et al do not specifically teach the weight amounts specified in claim 4.

However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ said amounts; thus arriving at the claimed invention. One skilled in the art would be motivated to do so, with a reasonable expectation of success, because the concentrations specified by Trotter et al would result in amounts comparable to the lower weight amounts of the claimed invention, absent evidence to the contrary. Additionally, it would be within the purview of the skilled artisan to manipulate the amounts of the hormones from within said ranges by routine experimentation, in order to optimize the efficacy of the resultant emulsion.

Conclusion

No claims are allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BARBARA FRAZIER whose telephone number is (571)270-3496. The examiner can normally be reached on Monday-Thursday 9am-4pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BSF

/Ashwin Mehta/
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